Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

Hydrofluoric Acid (HF) Plant
Honeywell International Inc. - Geismar Complex
Geismar, Ascension Parish, Louisiana
Agency Interest Number: 2082
Activity Number: PER20090008
Proposed Permit Number: 2394-V1

I. APPLICANT

Company:
Honeywell International Inc. - Geismar Complex
P. O. Box 226
Geismar, Louisiana 70734-0226

Facility:
Hydrofluoric Acid (HF) Plant
Honeywell International Inc. – Geismar Complex
5525 Highway 3115
Geismar, Ascension Parish, Louisiana
Approximate geographic coordinates of facility front gate: 30 13 55 Latitude, 91 03 00 Longitude

II. FACILITY AND CURRENT PERMIT STATUS

The Honeywell International Inc. (Honeywell) - Geismar Complex, an existing chemical manufacturing facility, began operation in 1967. The Honeywell – Complex consists of the Fluorocarbon Plants which produce fluorocarbon products under Part 70 Operating Permit No. 0180-00003-V1 issued on January 17, 2007 and a Hydrofluoric Acid (HF) Plant which produces hydrofluoric acid under Part 70 Operating Permit No. 2394-V0 issued on June 22, 2006.

In 2005, Honeywell replaced two emergency generator sets which provide back-up power to equipment in the HF Plant with two new diesel powered electric generators (Emission Point Nos. (EPN) 2-04 and 3-04). Because of time constraints, Honeywell elected to permit these emission sources separately in a Part 70 permit (Permit No. 2910-V0 issued on November 17, 2005) rather than submit an application for a permit modification. At the time of permit issuance, the nonattainment status of Ascension Parish was designated as marginal under the 8-hour standard. Although the project

did not qualify as a major modification under the Nonattainment New Source Review (NNSR) program, Honeywell elected to comply with NNSR major modification regulations by providing emission offsets at a 1.2 to 1 ratio and by employing Lowest Achievable Emission Rate (LAER) technology (the use of state-of-the-art engine design for diesel engines). Permit No. 2910-V0 was consolidated into the initial Part 70 Operating Permit for the HF Plant (Permit N. 2394-V0) which was issued on June 22, 2006.

This permit addresses the permitting requirements for the HF Plant.

Process Description

Hydrogen fluoride (HF), or hydrofluoric acid, is produced by reacting fluorspar (calcium fluoride) with sulfuric acid (H_2SO_4) in an anhydrous environment. The reaction occurs in externally-heated horizontal rotary kilns. The produced HF gas is routed through a cooling and purification train for removal of water, H_2SO_4 mist, and other impurities. It is then condensed and routed to storage as commercial grade HF. Solid calcium sulfate ($CaSO_4$), a by-product of this process, is drawn from the furnaces, slurred with pond water, transported to a series of neutralizers, and deposited in a stacking facility.

Sulfur dioxide (SO_2) is formed by the partial reduction of the HF residue at furnace temperatures. Some of the SO_2 is condensed with the HF commercial grade product. The remaining SO_2 is carried with the condenser's overhead vapors to the tail gas scrubbers. SO_2 is removed from the commercial grade HF by distillation to produce high purity grade HF. The SO_2 is recycled to the cooling and purification train.

The tail gas passes through a series of three (3) wet scrubbers. The first of these, the acid scrubber, uses H_2SO_4 as scrubbing medium to recover HF which escapes the condensers. The recovered HF is rerouted to the furnaces. Each of the next two (2) scrubbers, the water and SO_2 scrubbers, use water as scrubbing fluid. The water scrubber absorbs silicon tetrafluoride and the SO_2 scrubber absorbs SO_2.

Products are routed to on-site storage vessels from which they are eventually sent to transfer racks for loading into rail cars and tank trucks. Anhydrous HF is stored in pressure vessels. Aqueous HF is stored in fixed roof tanks that are controlled by scrubbers. The HF Plant has a combination rail/truck loading rack and the HF Additives Plants have a truck loading rack. Commercial grade finished HF from the HF Plant is blended for offsite shipment in the HF Additives Facility. All loading operations are controlled by scrubbers.

The slurry mixture is processed through a neutralizer and the neutralizer effluent flows to the residue stack. In this step, solid mostly $CaSO_4$ settle out. Liquid leaving the pond system, typically at a pH between 2.0 and 2.5, is reused in the plant as a scrubber medium or slurry water. Excess pond water is treated in a clarifier where the pH is raised between 6 and 9 before discharge. Clarifier underflow is returned to the residue stack.

The Honeywell International Inc. – Geismar Compex is a designated Part 70 source. The Honeywell – Geismar Complex was issued two Part 70 Operating Permits; the Fluorocarbon Plants currently operate under Part 70 Permit No. 0180-00003-V1 issued on January 17, 2007 and the HF Plant currently operates under Part 70 Permit No. 2394-V1 issued on June 22, 2006.

The Honeywell – Geismar Complex submitted timely applications for its initial Part 70 permits.

III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application and Emission Inventory Questionnaire dated November 17, 2009 were submitted by Honeywell International Inc. requesting a Part 70 operating permit modification. Additional information dated December 9, 2009 and December 29, 2009 was also received.

Proposed Permit

Part 70 Operating Permit No. 2394-V1 will be a modification of Part 70 Operating Permit No. 2394-V0 for the HF Plant.

In this Part 70 Operating Permit modification, Honeywell proposes the following changes:

1. To install a new utility boiler (Emission Point No. (EPN) 1-09) to replace the currently permitted boiler (EPN 1-96),

2. To replace an aqueous HF storage tank (Tank U-502) and reconcile certain tank numbers (i.e., Tank Nos. U-501 and U-502) in the existing permit. In the current permit, Tank U-501 was incorrectly identified as TEMPO ID No. EQT0053 and Tank U-502 as EQT0054. In this permit, Tank U-501 will be identified as EQT0054 and Tank U-502 will be identified as EQT0126.

3. To reconcile emissions from the HF Additives Unit 1 Fume Scrubber (EPN 1-96A) to reflect proper throughputs for the unit.

4. To remove sources associated with the HF Additives Unit 2 which was not constructed.

5. To install pre-heaters in the acid feed streams of each of the four (4) HF furnaces. The pre-heaters will utilize steam, which will be produced by the new utility boiler (EPN 1-09), as the heating agent.

6. To reconcile emissions from the HF Tail Gas Scrubber System (EPN 89-15) based on most recent data, including the effects of the pre-heater systems associated with the HF furnaces.

7. To add a storage tank (EPN 10-09) to store an acidic arsenic material which was authorized through a Case-by-Case Insignificant Activity notification in July 2009.

8. To remove the requirement to operate the water scrubber in addition to the SO_2 scrubber (which also uses water as the scrubbing medium), both of which are currently parts of the HF Tail Gas Scrubber System (EPN 89-15). A recent design analysis has shown that the use of the water scrubber is not necessary to achieve the level of emissions authorized by the permit for the tail gas scrubbing system since the SO_2 scrubber alone operates at a removal efficiency of greater than 99 percent for both silicon tetrafluoride (SiF_4) and sulfur dioxide (SO_2).

Also, in this permit modification, the following permit revisions were made by the Louisiana Department of Environmental Quality (LDEQ):

1. All citations and references to 40 CFR 63 Subpart DDDDD were removed from the permit for certain emission sources since the Court of Appeals for the District of Columbia circuit vacated this rule on July 30, 2007 and no revised rule has been promulgated.

2. For permit clarity and to remove repetitive regulations on certain emission sources, all common equipment groups in TEMPO were removed and the regulations for the corresponding emission sources were assigned to the individual emission sources.

Hydrofluoric Acid (HF) Plant
Honeywell International Inc. - Geismar Complex
Geismar, Ascension Parish, Louisiana
Agency Interest Number: 2082
Activity Number: PER20090008
Proposed Permit Number: 2394-V1

3. Due to recent TEMPO format changes, the Permitted Total group (GRP0010) was replaced with the Unit or Facility Wide group (UNF0002).

4. The 40 CFR Part 70 General Conditions and the Louisiana General Conditions were removed from the Air Permit Briefing Sheet (Word Document portion of the air permit) and included by reference via citations LAC 33:III.535 and LAC 33:III.537, respectively, in the Unit or Facility Wide Group (UNF0002).

Permitted Air Emissions

Estimated emissions in tons per year for the HF Plant are as follows:

Pollutant	Before	After	Change
PM_{10}	52.78	52.78	-
SO_2	78.76	34.89	- 43.87
NO_X	94.53	91.48	- 3.05
CO	89.28	135.27	+ 45.99
VOC *	9.73	8.91	- 0.82

* VOC LAC 33:III.Chapter 51 Toxic Air Pollutants (TAPs)			
Pollutant	**Before**	**After**	**Change**
1,3-butadiene[1]	0.001	0.001	-
2,2,4-trimethylpentane	< 0.01	< 0.01	-
Acetaldehyde[1]	0.003	0.003	-
Acrolein	< 0.001	< 0.001	-
Benzene	< 0.01	0.01	-
Cumene	< 0.01	< 0.01	-
Ethyl benzene	< 0.01	< 0.01	-
Formaldehyde	0.22	0.22	-
n-Hexane	< 0.001	< 0.001	-
Naphthalene	< 0.001	< 0.001	-

Hydrofluoric Acid (HF) Plant
Honeywell International Inc. - Geismar Complex
Geismar, Ascension Parish, Louisiana
Agency Interest Number: 2082
Activity Number: PER20090008
Proposed Permit Number: 2394-V1

* VOC LAC 33:III.Chapter 51 Toxic Air Pollutants (TAPs)			
Pollutant	**Before**	**After**	**Change**
Methanol	0.11	0.11	-
Methyl tertiary butyl ether	0.08	0.08	-
Polynuclear Aromatic Hydrocarbons	< 0.001	< 0.001	-
Toluene[1]	< 0.01	0.01	-
Xylene[1]	< 0.01	< 0.01	-
Total	0.478	0.478	-

[1] Highly Reactive Volatile Organic Compound (HRVOC)

Other VOC	8.43

Non-VOC TAPs			
Pollutant	**Before**	**After**	**Change**
Arsenic (and compounds)	0.19	0.19	-
Chlorine	0.42	0.42	-
Hydrofluoric Acid (HF)	6.88	6.20	- 0.68
Mercury (and compounds)	< 0.01	< 0.01	-
Nitric Acid (HNO_3)	0.12	0.12	-
Sulfur Trioxide (SO_3)	5.36	5.36	-
Sulfuric Acid (H_2SO_4)	2.57	2.57	-
Total	15.55	14.87	- 0.68

Other Non-VOC			
Pollutant	**Before**	**After**	**Change**
Ozone Depleting Substances (ODS)	8.55	8.55	-
Total Suspended Particulate (TSP)	52.76	54.61	+ 1.85

Hydrofluoric Acid (HF) Plant
Honeywell International Inc. - Geismar Complex
Geismar, Ascension Parish, Louisiana
Agency Interest Number: 2082
Activity Number: PER20090008
Proposed Permit Number: 2394-V1

IV. REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

Applicability and Exemptions of Selected Subject Items

ID No.	Requirement	Note
89-72, Fire Water Pump Engine # 1 89-74, Fire Water Pump Engine # 2 2-02, Clarifier Diesel Pump Engine 3-02A, Furnace Rotator Engine No. 1 3-02B, Furnace Rotator Engine No. 2 3-02C, Furnace Rotator Engine No. 3 3-02D, Furnace Rotator Engine No. 4 17-02, Atlas Copco Air Compressor 18-02, Brambles Sullair Air Compressor 19-02, Ingersol Rand Air Compressor 20-02, Emergency River Water Pump 21-02, Emergency Sump Pump 89-71, Clarifier Diesel Generator Engine	LAC 33:III.Chapter 22 – Control of Emissions of Nitrogen Oxides	**EXEMPT.** Exempt as diesel fired stationary internal combustion engines. [LAC 33:III.2201.C.14]
	LAC 33:III.5109 – Emission Control and Reduction Requirements and Standards State Only	**EXEMPT.** Emissions from the combustion of Group 1 virgin fossil fuels are exempt from the requirements of this chapter. [LAC 33:III.5105.B.3.a]
	40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	**DOES NOT APPLY.** Engines have not been constructed, modified, or reconstructed since July 11, 2005. [40 CFR 60.4200(a)(2)]

Hydrofluoric Acid (HF) Plant
Honeywell International Inc. - Geismar Complex
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Agency Interest Number: 2082
Activity Number: PER20090008
Proposed Permit Number: 2394-V1

ID No.	Requirement	Note
(continued) 89-72, Fire Water Pump Engine # 1 89-74, Fire Water Pump Engine # 2 2-02, Clarifier Diesel Pump Engine 3-02A, Furnace Rotator Engine No. 1 3-02B, Furnace Rotator Engine No. 2 3-02C, Furnace Rotator Engine No. 3 3-02D, Furnace Rotator Engine No. 4 17-02, Atlas Copco Air Compressor 18-02, Brambles Sullair Air Compressor 19-02, Ingersol Rand Air Compressor 20-02, Emergency River Water Pump 21-02, Emergency Sump Pump 89-71, Clarifier Diesel Generator Engine	40 CFR 60 Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	**DOES NOT APPLY.** Engines do not meet the definition of a spark ignition internal combustion engine as defined in 40 CFR 60.4248. Engines burn diesel and are compression ignition internal combustion engines. [40 CFR 60.4230(a)]
	40 CFR 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	**EXEMPT.** Engines are existing compression ignition (CI) stationary reciprocating internal combustion engines (RICEs) and do not have to meet the requirements of this Subpart and of subpart A of this part. No initial notification is necessary. [40 CFR 63.6590(b)(3)]
2-04, Clarifier Diesel Generator Engine 3-04, HF Diesel Generator Engine	LAC 33:III.Chapter 22 – Control of Emissions of Nitrogen Oxides	**EXEMPT.** Exempt as diesel fired stationary internal combustion engines. [LAC 33:III.2201.C.14]
	LAC 33:III.5109 – Emission Control and Reduction Requirements and Standards State Only	**EXEMPT.** Emissions from the combustion of Group 1 virgin fossil fuels are exempt from the requirements of this chapter. [LAC 33:III.5105.B.3.a]
	40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	**DOES NOT APPLY.** Engines were manufactured prior to April 1, 2006 and are not fire pump engines. [40 CFR 60.4200(a)(2)(i)]

Hydrofluoric Acid (HF) Plant
Honeywell International Inc. - Geismar Complex
Geismar, Ascension Parish, Louisiana
Agency Interest Number: 2082
Activity Number: PER20090008
Proposed Permit Number: 2394-V1

ID No.	Requirement	Note
(continued) 2-04, Clarifier Diesel Generator Engine 3-04, HF Diesel Generator Engine	40 CFR 60 Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	**DOES NOT APPLY.** Engines do not meet the definition of a spark ignition internal combustion engine as defined in 40 CFR 60.4248. Engines burn diesel and are compression ignition internal combustion engines. [40 CFR 60.4230(a)]
	40 CFR 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	**EXEMPT.** Engines are new emergency stationary RICEs and do not have to meet the requirements of this Subpart and of subpart A of this part. However, the initial notification requirements of 40 CFR 63.6645(h) apply. [40 CFR 63.6590(b)(1)(i)]
89-56, HF Furnace No. 3 Air Heater Seal 89-56A, HF Furnace No. 3 Air Heater 89-57, HF Furnace No. 4 Air Heater Seal 89-57A, HF Furnace No. 4 Air Heater 11-05, HF Furnace No. 1 Air Heater Seal 11-05A, HF Furnace No. 1 12-05, HF Furnace No. 2 Air Heater Seal 12-05A, HF Furnace No. 2 89-37, HF Furnace Air Heater No. 1 89-38, HF Furnace Air Heater No. 2	LAC 33:III.Chapter 22 – Control of Emissions of Nitrogen Oxides	**EXEMPT.** Exempt as process heaters/furnaces with a maximum rated capacity of less than 40 MM Btu/hr. [LAC 33:III.2201.C.1]

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Agency Interest Number: 2082
Activity Number: PER20090008
Proposed Permit Number: 2394-V1

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(continued) 89-56, HF Furnace No. 3 Air Heater Seal 89-56A, HF Furnace No. 3 Air Heater 89-57, HF Furnace No. 4 Air Heater Seal 89-57A, HF Furnace No. 4 Air Heater 11-05, HF Furnace No. 1 Air Heater Seal 11-05A, HF Furnace No. 1 12-05, HF Furnace No. 2 Air Heater Seal 12-05A, HF Furnace No. 2 89-37, HF Furnace Air Heater No. 1 89-38, HF Furnace Air Heater No. 2	LAC 33:III.Chapter 51, Subchapter A – Comprehensive Toxic Air Pollutant Emission Control Program	**EXEMPT.** Sources combust natural gas, a Group 1 virgin fossil fuel. Emissions from the combustion of Group 1 virgin fossil fuels are exempt from the requirements of Subchapter A. [LAC 33:III.5105.B.3.a]
1-09, HF Utility Boiler	LAC 33:III.Chapter 22 – Control of Emissions of Nitrogen Oxides	Nitrogen oxides </= 0.20 lb/MMBTU. [LAC 33:III.2201.D.1]
		Fuel monitored by totalizer continuously. Monitor fuel usage with a totalizing fuel meter. [LAC 33:III.2201.H.1.a.i]
		Oxygen monitored by the regulation's specified method(s) continuously. Monitor oxygen concentration with an oxygen monitor. [LAC 33:III.2201.H.1.a.ii]
		Implement procedures to operate the boiler within the fuel and oxygen limits established during the initial compliance run in accordance with LAC 33:III.2201.G to continuously demonstrate compliance with the NOx limits of LAC 33:III.2201.D or E. [LAC 33:III.2201.H.1.a.iii]

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Geismar, Ascension Parish, Louisiana
Agency Interest Number: 2082
Activity Number: PER20090008
Proposed Permit Number: 2394-V1

ID No.	Requirement	Note
(continued) 1-09, HF Utility Boiler	LAC 33:III.Chapter 51, Subchapter A – Comprehensive Toxic Air Pollutant Emission Control Program	**EXEMPT.** Source combusts natural gas, a Group 1 virgin fossil fuel. Emissions from the combustion of Group 1 virgin fossil fuels are exempt from the requirements of Subchapter A. [LAC 33:III.5105.B.3.a]
	40 CFR 60 Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	**DOES NOT APPLY.** The heat input capacity of this boiler is less than 100 MMBTU/hr. [40 CFR 60.40b(a)]
	40 CFR 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Opacity </= 20%, except for one 6-minute period per hour of not more than 27% opacity. Comply with this limitation at all times, excluding periods of startup, shutdown, and malfunction. Subpart Dc. [40 CFR 60.43c(c)]
	40 CFR 64 – Compliance Assurance Monitoring (CAM)	**DOES NOT APPLY.** The boiler does not use a control device to achieve compliance with an emission limitation or standard. [40 CFR 64.2(a)(2)]

Hydrofluoric Acid (HF) Plant
Honeywell International Inc. - Geismar Complex
Geismar, Ascension Parish, Louisiana
Agency Interest Number: 2082
Activity Number: PER20090008
Proposed Permit Number: 2394-V1

ID No.	Requirement	Note
89-64, HF Plant Fugitive Emissions 2-96, HF Additives Unit 1 Fugitives 4-02, Clam Shell Fugitives 5-02, Gantry Fugitives 6-02, Belt 1-2 Transfer Fugitives 7-02, Belt 2-3 Transfer Fugitives 8-02, Belt 3-4 Transfer Fugitives 9-02, Belt 4-5 Transfer Fugitives 10-02, Spar Storage Building No. 1 Transfer Fugitives 11-02, Truck Loading Fugitives 12-02, Haul Road Fugitives 13-02, Spar Storage Building No. 2 Transfer Fugitives 14-02, Hopper Transfer Fugitives 15-02, Grizzly Feeder Transfer Fugitives 16-02, Grizzly Feeder Fugitives	LAC 33:III.2122 – Fugitive Emission Control for Ozone Nonattainment Areas and Specified Parishes	**DOES NOT APPLY.** Facility is not a petroleum refinery, natural gas processing plant, SOCMI facility, MTBE manufacturing facility, or polymer manufacturing facility.

Non-attainment New Source Review (NNSR)

The Honeywell - Geismar Complex is classified as a major stationary source located in Ascension Parish which is included in the Baton Rouge ozone non-attainment area. This permit addresses the addition of a new utility boiler (EPN 1-09) and a new storage tank (EPN 10-09), as well as other reconciliatory issues. As shown in Table 1 below, the project associated emissions increases for the NNSR pollutants, NO_x and VOC, are below their respective NNSR trigger level of 25 tons per year (TPY). Consequently, the NNSR program does not apply to this permit modification/renewal.

Table 1

Pollutant	Baseline Actual Emissions (24-month period) (TPY)	Post-Project Potential to Emit (TPY)	Change	NNSR Trigger Value (TPY)
NO_x	0	18.40	+18.40[1]	25
VOC	0	1.18	+ 1.18	25

[1] The 18.40 tpy NO_x increase is both the emissions increase associated with the boiler project and the net emissions increase as defined in LAC 33:III.504.K.. The most recent NO_x increase prior to this permit action was a 5.87 tpy increase that was authorized in Permit No. 2910-V0, issued on November 17, 2005, which is outside of the contemporaneous period. In addition, should that increase have occurred

during the contemporaneous period, it would not be creditable since Permit No. 2910-V0 was issued as a major modification under LAC 33:III.504.

Prevention of Significant Deterioration (PSD) Review

As shown in Table 2, the project associated emissions increases for the PSD pollutants, PM_{10}, SO_2, and CO, are less than their respective PSD trigger level. Consequently, the PSD program does not apply to this permit modification/renewal.

Table 2

Pollutant	Baseline Actual Emissions (24-month period) (TPY)	Post-Project Potential to Emit (TPY)	Change	PSD Trigger Value (TPY)
PM_{10}	0	1.63	+ 1.63	15
NO_x	0	18.40	+18.40	40
SO_2	0	0.13	+ 0.13	40
CO	0	64.04	+ 64.04	100

The emissions of CO will increase by more than 50 percent of its significance level. However, since the facility calculated post-project emissions by using the project's *Potential to Emit* (as defined in LAC 33:III.509.B) instead of using the project's *Projected Actual Emissions* (as defined in LAC 33:III.509.B), there is no reasonable possibility that the project will result in a significant emissions increase. Therefore, pre-project and post-project monitoring, recordkeeping, and reporting requirements pursuant to LAC 33:III.509.R.6 are not required.

Streamlined Equipment Leak Monitoring Program

The HF Plant does not operate under a streamlined equipment leak monitoring program.

Air Quality Analysis

Emissions associated with the proposed modification in this permit were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions. The current permit contains the Air Quality Dispersion Modeling results below, but the date of submittal of the results is unknown.

Hydrofluoric Acid (HF) Plant
Honeywell International Inc. - Geismar Complex
Geismar, Ascension Parish, Louisiana
Agency Interest Number: 2082
Activity Number: PER20090008
Proposed Permit Number: 2394-V1

Dispersion Model(s) Used: ISCST3

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Toxic Air Pollutant Ambient Air Quality Standard or (National Ambient Air Quality Standard {NAAQS})
PM_{10}	24-hr	91.7	(150)
PM_{10}	Annual	29.5	(50)

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

Honeywell International Inc. did not request a permit shield in this permit modification.

VI. PERIODIC MONITORING

Periodic monitoring is required for certain sources in this permit. All periodic monitoring shall be conducted in accordance with state and federal regulations, as applicable. See the Facility Specific Requirements of the draft Part 70 permit for monitoring requirements.

Hydrofluoric Acid (HF) Plant
Honeywell International Inc. - Geismar Complex
Geismar, Ascension Parish, Louisiana
Agency Interest Number: 2082
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Proposed Permit Number: 2394-V1

VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H_2S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_X) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: $\geq$ 10 tons per year of any toxic air pollutant; $\geq$ 25 tons of total toxic air pollutants; and $\geq$ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10} – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO_2) – An oxide of sulfur.

Sulfuric Acid (H_2SO_4) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.

PUBLIC NOTICE
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ)
HYDROFLUORIC (HF) PLANT
HONEYWELL INTERNATIONAL INC. - GEISMAR PLANT
PROPOSED PART 70 OPERATING PERMIT MAJOR MODIFICATION

The LDEQ, Office of Environmental Services, is accepting written comments on a proposed Part 70 (Title V) Operating Permit major modification for Honeywell International Inc., P.O. Box 226, Geismar for the Hydrofluoric Acid (HF) Plant. **The facility is located at 5525 Highway 3115, Geismar, Ascension Parish.**

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In this permit modification, Honeywell requested the following changes to its current HF Plant Part 70 permit:

1. To install a new utility boiler (Emission Point No. (EPN) 1-09) to replace the currently permitted boiler (EPN 1-96).
2. To replace an aqueous HF storage tank (Tank U-502) and reconcile certain tank numbers (i.e., Tank Nos. U-501 and U-502) in the existing permit.
3. To reconcile emissions from the HF Additives Unit 1 Fume Scrubber (EPN 1-96A) to reflect proper throughputs for the unit.
4. To remove sources associated with the HF Additives Unit 2 which was not constructed.
5. To install pre-heaters in the acid feed streams of each of the four (4) HF furnaces. The pre-heaters will utilize steam, which will be produced by the new utility boiler (EPN 1-09), as the heating agent.
6. To reconcile emissions from the HF Tail Gas Scrubber System (EPN 89-15) based on most recent data, including the effects of the pre-heater systems associated with the HF furnaces.
7. To add a storage tank (EPN 10-09) to store an acidic arsenic material which was authorized through a Case-by-Case Insignificant Activity notification in July 2009.
8. To remove the requirement to operate the water scrubber in addition to the SO2 scrubber (which also uses water as the scrubbing medium), both of which are currently parts of the HF Tail Gas Scrubber System (EPN 89-15). A recent design analysis has shown that the use of the water scrubber is not necessary to achieve the level of emissions authorized by the permit for the tail gas scrubbing system since the SO2 scrubber alone operates at a removal efficiency of greater than 99 percent for both silicon tetrafluoride (SiF4) and sulfur dioxide (SO2).

Since this proposed permit does not result in any physical change or change in the method of operation for which there is an increase in emissions of NOx or VOC in excess of the Nonattainment New Source Review (NNSR) trigger values of 25 tons per year (tpy) as specified in LAC 33:III.504.M.1.a, review under the NNSR program is not required. Also, since the potential to emit of NOx, carbon monoxide (CO), particulate matter (PM10), and sulfur dioxide (SO2) associated with this proposed permit are below the Prevention of Significant Deterioration (PSD) significance levels (40 tpy for NOx, 100 tpy for CO, 15 tpy for PM10, and 40 tpy for SO2) as defined in LAC 33:III.509, PSD review is not required.